

INFORMATION USE PATTERN BY THE RESEARCH SCHOLARS AND FACULTY MEMBERS OF AGRICULTURAL SCIENCE UNIVERSITIES IN KARNATAKA

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ABSTRACT

Information usage studies are like part of library professionals from the twentieth century to identify the effective usage of information resources available in their libraries. This study investigates the information use pattern by the research scholars and faculty members of Agricultural Science universities in Karnataka. A well structured questionnaire has been formulated and distributed among the research scholars and faculty members of Agricultural Sciences universities in Karnataka in order to ascertain the information use pattern, i.e. frequency of library visits, purpose of a visit to the library, purpose of use of information sources, use of electronic resources, frequency of use of e-resources and preferred file formats. The outcome and suggestions of the study would be beneficial for them to take appropriate measures to improve their information use pattern.

KEYWORDS: Electronic Resources, Agricultural Sciences, Information Use Pattern & User Survey

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INTRODUCTION

Agriculture has been the ancient occupation of mankind and it is the main stay of India's economy and development of farming community. Today libraries are undergoing transformation on one side and they are facing three major challenges shrinking budgets, shortage of space and increasing cost of publications; on the other hand, there are the challenges posed by advances in the field of Information and Communication Technology. The remarkable growth of electronic information in the last few decades has changed the scenario and has solved the problem of space. In this digital era, digitized information is available on the internet. The information technology has changed the complexion of the libraries in a big way. Electronic resources play a vital role in the field of basic and agricultural science. The information explosion has witnessed in the production of a wide variety of information resources comprising of paper media, film media, electronic media, magnetic media, optical media and web media. These resources are collected and stored in libraries and individual scientists also build their own collection. The scientific information generated from various research institutions is being collected and stored in agricultural science libraries for reference and retrieval by the clients. The results of the study will help to collection developers in designing suitable policy and assess the technical intricacies faced by the library professionals in providing effective electronic information services.

OBJECTIVES OF THE STUDY

The main objectives of the study are:

- To examine the frequency and purpose of visit to the library by the research scholars and faculty members of Agricultural Science universities in Karnataka.
- To know the purpose of use of library resources and to examine the use of various types of electronic resources by the research scholars and faculty members of Agricultural Science universities in Karnataka.
- To know the various field based search techniques used by the research scholars and faculty members for accessing online information resources.
- To know the preferred file format for accessing and using electronic resources by the research scholars and faculty members of Agricultural Science universities in Karnataka.

METHODOLOGY

The questionnaire method was used for the present study to collect the necessary data. A total of 1109 questionnaires were distributed among the research scholars and members of faculty of Agricultural Science universities in Karnataka, of which 846 filled up questionnaire, were received back consisting of 76.00% responses. The highest numbers of questionnaires have been received from University of Agricultural Sciences, Bangalore with 238 (28.13%) responses, followed by University of Agricultural Sciences, Dharwad with 217 (25.65%) responses, University of Agricultural Sciences, Raichur with 168 (19.85%) responses, University of Horticultural Sciences, Bagalkot with 117 (13.82%) responses and University of Agricultural and Horticultural Sciences, Shivamogga with 106 (12.52%) responses. In addition to the questionnaire method, interview schedule and observation method were also used to collect required information.

ANALYSIS AND INTERPRETATION OF DATA

The data was collected by different methods were analyzed and interpreted and same presented in the following tables.

Gender Wise Distribution

The gender wise distribution of respondents under the study has been shown in Table-1. The Table-1 shows that out of the 846 total respondents, 561 (66.31%) are 'Male' and the remaining 285(33.69%) are 'Female'.

Table 1: Gender Wise Distribution

Gender	Research Scholars (N=387)	Faculty Members (N=459)	Total (N=846)
Male	278(71.83)	283(61.66)	561(66.31)
Female	109(28.17)	176(38.34)	285(33.69)
$\chi^2 = 9.7383$, df = 1, $P(\chi^2 > 9.7383) = 0.0000$			

The Table-1 also depicts that out of 387 research scholars, 278 (71.83%) are 'Male' and remaining 109 (28.17%) are 'Female'. Among the 459 faculty, 283(61.66%) are 'Male' and remaining 176(38.34%) are 'Female'. The χ^2 test was conducted and there exists a significant relationship between the respondents and gender ($\chi^2 = 9.7383$, df = 1, $P(\chi^2 > 9.7383) = 0.0000$) >0.05.

Frequency of Library Visits

The frequency of visit to the library by the respondents has been summarized in Table-2. The Table-2 depicts that 354(41.84%) of respondents visit the library 'Daily' with mean value of 1.56 and SD 0.50, followed by 182(21.51%) of respondents visit the library 'Occasionally' with mean value of 1.54 and SD 0.50, 163(19.27%) of respondents visit the library 'weekly' with mean value of 1.48 and SD 0.50. and 147(17.38%) of respondents visit the library 'Once in a month' with mean value of 1.57 and SD 0.49.

Table 2: Frequency of Library Visits

Frequency of Library Visit	Research Scholars (N=387)	Faculty Members (N=459)	Total (N=846)	Mean	SD
Daily	156(40.31)	198(43.14)	354(41.84)	1.56	0.50
Weekly	84(21.71)	79(17.21)	163(19.27)	1.48	0.50
Once in a month	63(16.28)	84(18.30)	147(17.38)	1.57	0.49
Occasionally	84(21.71)	98(21.35)	182(21.51)	1.54	0.50

The Table-2 also depicts that 156(40.31%) of research scholars and 198(43.14%) of faculty members visit the library 'Daily'.

Purpose of Visit to the Library

The purpose of visit to the library by the respondents has been summarized in Table-3. The Table-3 depicts that 764(90.31%) of respondents visit the library for borrowing books with mean value of 1.52 and SD 1.50, followed by 453(53.55%) of respondents visit to access Internet with mean value of 1.30 and SD 0.46, 447(52.84) for reading newspapers/ magazines, with mean value of 1.47 and SD 0.47, 367(43.38) for accessing e-books with mean value of 1.50 and SD 0.50, 365(43.14%) for photocopying, with mean value of 1.20 and SD 0.41, 278(32.86%) for accessing electronic thesis, with mean value of 1.29 and SD 0.46, 266(31.44%) for the purpose of refereeing with mean value of 1.25 and SD 0.44, 256(30.26%) for accessing e-journals, with mean value of 1.37 and SD 0.49, 183(21.63%) for discussion with friends with mean value of 1.48 and SD 0.50, and 37 (04.37 %) of respondents visit library for the purpose of accessing reports, tutorials, standards, downloading application software etc. with mean value of 1.29 and SD 0.46.

Table 3: Purpose of Visit to the Library

Purpose	Research Scholars (N=387)	Faculty Members (N=459)	Total (N=846)	Mean	SD
Book borrowing	368(95.09)	396(86.27)	764(90.31)	1.52	1.50
Reading Newspapers/Magazines	237(61.24)	210(45.75)	447(52.84)	1.47	0.47
Refereeing	198(51.16)	68(14.81)	266(31.44)	1.25	0.44
Accessing Internet	316(81.65)	137(29.85)	453(53.55)	1.30	0.46
Accessing E-Journals	159(41.09)	97(21.13)	256(30.26)	1.37	0.49
Accessing E-Books	183(47.29)	184(40.09)	367(43.38)	1.50	0.50
Accessing E-Thesis	195(50.39)	83(18.08)	278(32.86)	1.29	0.46
Discussion with friend	94(24.29)	89(19.39)	183(21.63)	1.48	0.50
Photocopying	289(74.68)	76(16.55)	365(43.14)	1.20	0.41
Others	26 (06.71%)	11 (02.39)	37 (04.37)	1.29	0.46

Note: Figures in parentheses indicate percentage and because of multiple choice options the percentage is exceeded to more than 100%.

The Table-3 also depicts that 368(95.09%) of research scholars and 396(86.27%) of faculty visit the library for borrowing books.

Purpose of Use of Information Sources

The purpose of use of information sources by the respondents has been summarized in Table-4. The Table-4 depicts that 776(91.73%) of respondents use information resources for writing research articles, followed by 651(76.95%) for preparation for teaching / seminars, 645(76.24) for use resources for the purpose of research, 347(41.02%) for writing proposals, 346(40.90%) for the purpose of examination and 27 (03.19%) of respondents use information resources for various purposes like thesis writing, report writing, content reference, cross checking plagiarized content etc.

Table 4: Purpose of Use of Information Sources

Use of Information Sources	Research Scholars (N=387)	Faculty Members (N=459)	Total (N=846)
Examination	197(50.90)	149(32.46)	346(40.90)
Research	352(90.96)	293(63.83)	645(76.24)
Teaching/Seminars	216(55.81)	435(94.77)	651(76.95)
Article writing	319(82.43)	457(99.56)	776(91.73)
Proposal writing	154(39.79)	193(42.05)	347(41.02)
Others	16 (04.13)	11 (02.39)	27 (03.19)
$\chi^2 = 87.6$, $df = 5$, $\chi^2/df = 17.52$, $P(\chi^2 > 87.6) = 0.0000$			

Note: Figures in parentheses indicate percentage and because of multiple choice options the percentage is exceeded to more than 100%.

The Table-4 also depicts that 352(90.96%) of research scholars use information resources for the purpose of research and 457(99.56%) of faculty use information resources for the purpose of writing articles. The χ^2 test was conducted and there exists a significant relationship between the respondents and the purpose of use of information sources ($\chi^2 = 87.6$, $df = 5$, $\chi^2/df = 17.52$, $P(\chi^2 > 87.6) = 0.0000$) > 0.05 .

Frequency of Use of E-Resources

The frequency of use of e-resources by the respondents has been summarized in Table-5. The Table-5 depicts that 175(20.69%) of respondents use e-resources daily, followed by 151(17.85%) of respondents use twice in a week, 148(17.49%) of respondents use once in a week, 143(16.90%) of respondents use fortnightly, 136(16.08%) of respondents use once in a month and 93(10.99%) of respondents use e-resources very rarely.

Table 5: Frequency of Use of E-Resources

Periodicity	Research Scholars (N=387)	Faculty Members (N=459)	Total (N=846)
Daily	78(20.16)	97(21.13)	175(20.69)
Once in a week	66(17.05)	82(17.86)	148(17.49)
Twice in a week	62(16.02)	89(19.39)	151(17.85)
Fortnightly	58(14.99)	59(12.85)	143(16.90)
Once in a month	84(21.71)	78(16.99)	136(16.08)
Very rarely	39(10.08)	54(11.76)	93(10.99)
$\chi^2 = 5.180$, $df = 5$, $\chi^2/df = 1.04$, $P(\chi^2 > 5.180) = 0.3943$			

The Table-5 also depicts that 84(21.71%) of research scholars use e-resources once in a month and 97(21.13%) of faculty use e-resources daily. The χ^2 test was conducted and their exists significant relationship between the respondents and frequency of use of e-resources $\chi^2 = 5.180$, $df = 5$, $\chi^2/df = 1.04$, $P(\chi^2 > 5.180) = 0.3943 > 0.05$.

Use of E-Resources

The use of various types of e-resources by the respondents has been summarized in Table-6.

The Table-6 depicts that 836(98.82%) of respondents use CABI Abstract, followed by 815(96.33%) use open source e-resources, 791(93.50%) use CeRA- JGATEPLUS, 660(78.01%) use e-journals subscribed by the library, 647(76.48%) use CeRA- E-Books, 550(65.01%) use IndiaAgriStat, 476(56.26%) use IDEAL, 442(52.25%) use e-books subscribed by the library, 380(44.92%) use Krishikosh, 331(39.13%) of respondents use Agricat.

Table 6: Use of E-Resources

E-Resources	Research Scholars (N=387)	Faculty Members (N=459)	Total (N=846)
Library Subscribed E-Journal	367(94.83)	293(63.83)	660(78.01)
Library Subscribed E-Books	293(75.71)	149(32.46)	442(52.25)
CeRA- JGATEPLUS	356(91.99)	435(94.77)	791(93.50)
CeRA- E-Books	329(85.01)	318(69.28)	647(76.48)
CABI Abstract	379(97.93)	457(99.56)	836(98.82)
Krishikosh	298(77.00)	82(17.86)	380(44.92)
Agricat	234(60.47)	97(21.13)	331(39.13)
IndiaAgriStat	257(66.41)	293(75.71)	550(65.01)
IDEAL	379(97.93)	97(21.13)	476(56.26)
Open Source E-Resources	381(98.45)	434(94.55)	815(96.33)

Note: Figures in parentheses indicate percentage and because of multiple choice options the percentage is exceeded to more than 100%.

The Table-6 also depicts that 381(98.45%) of research scholars use open source e-resources and 435(94.77%) of faculty use CeRA- JGATEPLUS.

Field Based Search Techniques

The field based search techniques used by the respondent for searching e-resources has been summarized in Table-7.

The Table-7 depicts that 743(87.83%) of respondents search e-resources using 'Title' field, followed by 599(70.80%) of respondents by 'Author', 525(62.06%) search by 'Keyword' field, 166(19.02%) search by 'ISSN/ISBN' field, 67(07.92%) search by 'Publisher' field and 65(07.68%) of respondents search e-resources by using 'URI/URL'.

Table 7: Field Based Search Techniques

Search Fields	Research Scholars (N=387)	Faculty Members (N=459)	Total (N=846)
Keyword	231(59.69)	294(64.05)	525(62.06)
Author	257(66.41)	342(74.51)	599(70.80)
Title	314(81.14)	429(93.46)	743(87.83)
ISSN/ ISBN	73(18.86)	93(20.26)	166(19.02)
Publisher	19(04.91)	48(10.46)	67(07.92)
URI/URL	08(02.07)	57(12.42)	65(07.68)

Note: Figures in parentheses indicate percentage and because of multiple choice options the percentage is exceeded to more than 100%.

The Table-7 also depicts that 314(81.14%) of research scholars and 429(93.46%) of faculty search e-resources based on 'Title' field.

Preferred File Format for Using E-Resources

The preferred file format for using e-resources by the respondents has been summarized in Table-8.

The Table-8 depicts that 765(90.43%) of respondents prefer Portable Document Format for accessing e-resources, followed by 601(71.04%) of respondents prefer Microsoft Word format, 216(25.53%) of respondents prefer HTML file format and 170(20.09%) of respondents prefer SGML.

Table 8: Preferred File Format for Using of E-Resources

Preferred File Format	Research Scholars (N=387)	Faculty Members (N=459)	Total (N=846)
PDF	349(90.18)	416(90.63)	765(90.43)
MS Word	283(73.13)	318(69.28)	601(71.04)
HTML	19(04.91)	197(42.92)	216(25.53)
SGML	05(01.29)	165(35.95)	170(20.09)

The Table-8 also depicts that 349(90.18%) of research scholars and 416(90.63%) of faculty prefer Portable Document Format for accessing e-resources.

SUGGESTIONS

The following suggestions are made based on the study.

- Agricultural libraries need to restructure their budget policies by allocating a part of their annual budget for training their library professionals and users.
- The Agricultural university libraries should have user group mail so that, the new arrivals can be sent to all user at a time.
- Agricultural University libraries shall emphasize on need-based, value added users services through automated library, campus wide LAN, Wi-Fi and also with web based services.
- The libraries should organize seminars, workshops and orientation programmes for students at regular interval of time to keep them in phase with latest technologies.
- The libraries should adopt a hybrid collection development policy in order to fulfill the demand of the users, as it is needed.
- Agricultural science libraries should overcome the existing barriers and become the members for library consortia to crack down the library budget.
- All Agricultural science libraries shall safeguard their information resources by implementing electronic surveillance security systems. It may be video cameras, closed circuit television, electronic security systems, etc.
- A virtual private network is suggested for all Agricultural University libraries to link the library with off campus

users and professionals.

CONCLUSIONS

The study indicates that the agricultural research scholars and faculty members seek diverse information from varied sources for different purposes thus making it difficult to maintain support for the idea of a single mode of formal information channel. It has always been a challenge for researchers to get complete information on a pinpointed topic in agriculture. With the increasing popularity of web based access to traditional library resources, libraries which are the main facilitators in the scholarly communication system are caught between the producers and the end-users. The use of these resources can be increased if users are motivated to use these services in the library by providing them help in searching and downloading the information. In addition, the library should continue to provide support for old print journals, as users are also using a lot for their research purpose and also some users are uncertain about the transition from print to e-journals. The survey also tried to serve as a benchmark for the use of e-resources in agricultural colleges. The findings of the present study certainly enable the college libraries to evaluate and realign resources and services according to users' requirements effectively.

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